ABSTRACT OF THE DISCLOSURE

A sliding structure for an automotive engine includes a sliding member with a sliding portion and a lubricant applied to the sliding portion so that the sliding portion can make sliding contact with a counterpart member via the lubricant. The sliding member is either of a piston ring, a piston pin, a cam lobe, a cam journal, a plain bearing, a rotary vane and a timing chain. The sliding portion has a base made of a steel or aluminum material and a hard carbon film formed on the base to coat the sliding portion. The hard carbon film has a thickness of 0.3 to 2.0 μm, a Knoop hardness of 1500 to 4500 kg/mm^2, a surface roughness Ry (μm) satisfying the following equation: $Ry < \{(0.75 - Hk/8000) \times h + 0.07/0.8\}$, where h is the thickness (μm) of the film; and Hk is the Knoop hardness (kg/mm^2) of the film.